COAL MINING

December, 1960 Volume 37, No. 12

How much will it earn here?

TIME TO REPOWER WITH CATERPILLAR

No machine will pay you returns sitting in the shop. Anyway you count it . . . downtime costs money. When your equipment gets temperamental, let us repower new production into it . . . with dependable Caterpillar Engine Power.

Cat four-cycle Diesels are built to withstand the pounding of heavy construction work. Rugged, heavy-duty design of components gives them an extra edge to keep the job going 'round the clock. The simple fuel system won't get sensitive when the work gets rough . . . doesn't skip a beat. Cats run economically, too . . . burn a wide range of fuel including low-cost furnace oil to pack more work into every penny you spend for fuel. These features add up to performance, when and where it counts. Bring us your "sick" machines. We'll put new life in them with a Cat Diesel . . . available from 50 HP to over 730 HP.

YOUR CATERPILLAR POWER CENTER

Beckwith
MACHINERY COMPANY

6550 HAMILTON AVENUE, PITTSBURGH 6, PENNSYLVANIA
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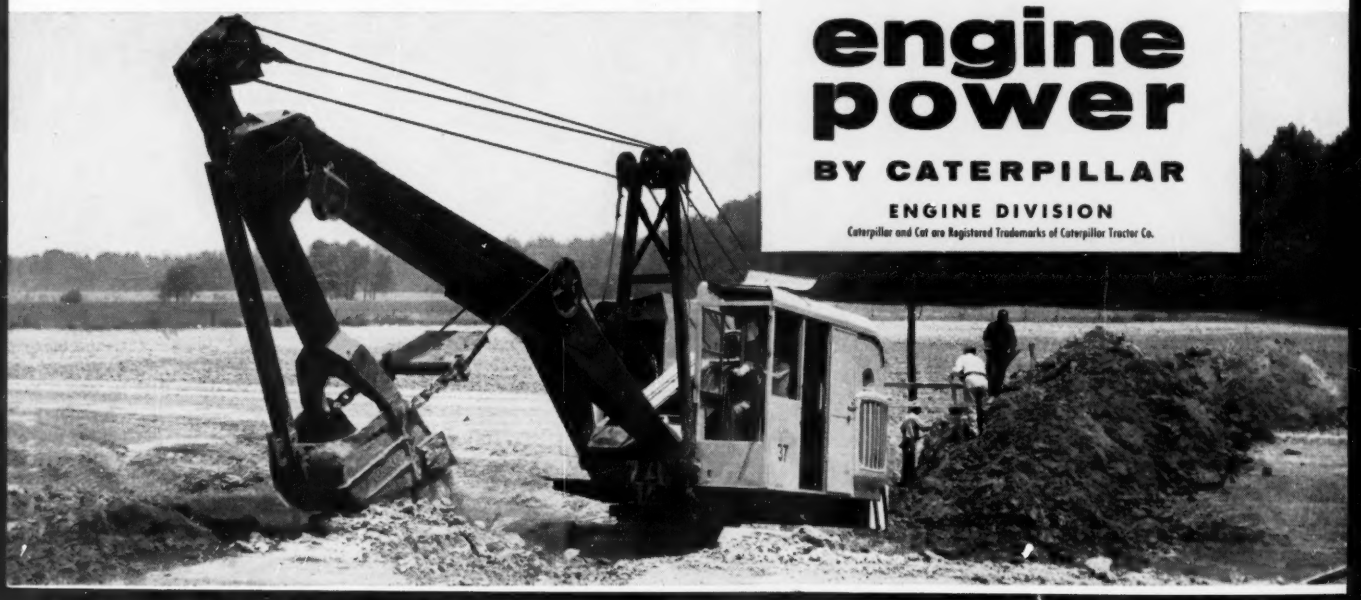
OLD TOWN ROAD, CLEARFIELD, PENNSYLVANIA
1356 EAST 12TH STREET, ERIE, PENNSYLVANIA
ROUTE 219 NORTH, SOMERSET, PENNSYLVANIA
BUCKHANNON PIKE, CLARKSBURG, WEST VIRGINIA

Plenty of lugging power is supplied to this backhoe by a torque converter-equipped D318. Matched-design torque converters are available for all models of Cat Diesel Engines.



engine power
BY CATERPILLAR
ENGINE DIVISION
Caterpillar and Cat are Registered Trademarks of Caterpillar Tractor Co.

COAL MINING

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Contents

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Beckwith's

Caterpillar Exchange Parts Assemblies

Are Now Bonded Buys!

PARTS ASSEMBLY

Guarantee Bond

Know All Men by these Presents,

that _____ (hereinafter called Seller),

of _____

is held and firmly bound unto _____ (hereinafter called Buyer)

of _____

in the sum of not exceeding the lesser of FIVE THOUSAND DOLLARS ($5,000.00) or Seller's price, with respect to each parts assembly described below, for the payment of which Seller hereby binds itself, its successors and assigns by these presents.

The Condition of this Obligation is such that Whereas Seller has sold to Buyer the below-described parts assembly or assemblies originally manufactured by Caterpillar Tractor Co. and reconditioned in accordance with practices recommended by Caterpillar Tractor Co.:

DESCRIPTION	PART NUMBER	SERIAL NUMBER	SALE PRICE

And Whereas Seller guarantees each said parts assembly against unsatisfactory performance due to defective material or workmanship for _____ days after the date of sale shown below (herein referred to as the guarantee period), the obligation under this guarantee being only to repair or replace, as Seller may elect, any said assembly which proves defective in material or workmanship under conditions of normal use during the guarantee period at Seller's expense (including cost of all necessary materials and labor) up to a maximum of the lesser of Five Thousand Dollars ($5,000.00) or Seller's price, with respect to each said assembly, except that the cost, if any, of transporting each said assembly from and to Seller's place of business shall be paid by the Buyer.

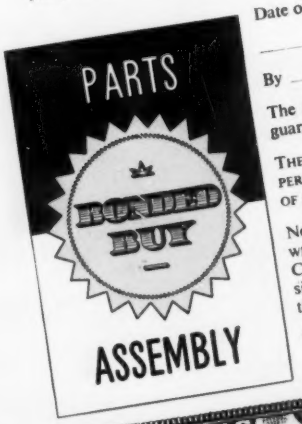
Now, Therefore, if Seller, its successors and assigns shall in all respects well and truly perform the obligation under the guarantee recited above, then this obligation shall be void; otherwise to remain in full force and effect.

THE ABOVE GUARANTEE IS VOID, AND SELLER SHALL BE UNDER NO OBLIGATION THEREUNDER, IF CLAIM IS NOT MADE TO THE SELLER WITHIN THREE (3) DAYS AFTER DISCOVERY OF THE DEFECT UPON WHICH THE CLAIM IS BASED.

No guarantee is made or authorized to be made by Seller other than that above set forth.

Date of sale and issuance: _____, 1960

By _____



The foregoing parts assembly guarantee bond is secured by a master guarantee of LUMBERMENS MUTUAL CASUALTY COMPANY, Chicago, Illinois.

THE MASTER GUARANTEE BOND WILL NOT APPLY IF THE GUARANTEE PERIOD IS FOR LESS THAN 30 DAYS OR MORE THAN 90 DAYS FROM DATE OF SALE.

Notice of claim under such master guarantee bond must be made in writing to the branch office of LUMBERMENS MUTUAL CASUALTY COMPANY located at 301 South Adams Street, Peoria, Illinois, within sixty (60) days after expiration of the guarantee period. See reverse of this instrument for copy of supporting master guarantee bond.

VALID ONLY IF ISSUED DURING 1960.

Q. What is a Bonded Buy Parts Assembly?

Answer: Reconditioned Caterpillar parts assemblies are stocked for your convenience in making speedy replacements of worn items. Beckwith has always guaranteed Caterpillar assemblies rebuilt in our service centers. Now we further back up our company guarantee with a bond. This is the same familiar and trusted Bonded Buy you've seen on the very highest quality Cat used equipment. If one of Beckwith's rebuilt assemblies should prove defective within 90 days, it will be replaced at no cost for the part. (Of course, if you want a Caterpillar-trained mechanic to make the replacement, standard service rates would apply.) A $5,000 guarantee bond, issued by Lumbermens Mutual, is your protection that rigid Caterpillar-recommended practices have been followed in reconditioning and that only genuine Caterpillar parts have been used.

Lobby display at Clarksburg, W. Va. Service Center shows representative exchange parts.

Q. How does the plan work?

Answer: You order the guaranteed parts assembly you need from any of Beckwith's six conveniently located parts departments. Merely install the reconditioned item and go back to work immediately. Beckwith will take your worn assembly and rebuild it to Caterpillar Bonded Buy specifications for the next user.

Q. How does it save money?

Answer: First of all, you pay only for the materials and workmanship required to bring your own assembly back to A-1 shape. No overtime charges . . . no unnecessary parts . . . no unnecessary labor. Then, too, you are getting a specialist-rebuilt Caterpillar parts assembly for your old one. You are sure that only long-lived Cat components have been used. This means longer parts life in the future because of trouble-free performance. Ordinarily, savings of the Bonded Buy assembly will run from 20 to 50 per cent of the cost of a new parts assembly.

Let us tell you how the Beckwith Bonded Buy Parts Assembly Exchange program will fit your particular requirements. Since our stock is constantly growing, check with us for the exact assembly you need.

YOUR CATERPILLAR DEALER

Beckwith

MACHINERY COMPANY

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Do You Know?

● The tools early man left behind him tell scientists more about man's evolution than do his bones.

Dr. Leo A. Estel of Ohio State University reported that the most important developments in man's evolution can be found from his cultural remains and by ethnological observations.

The brain, not the bones, is the most important factor in human evolution, he said.

The broad outlines of the evolution of man's skeleton are well known. They fit with what is known of the evolution of apes. However, the evolution of the important soft tissues of humans is less well known, and that of the central nervous system and the brain, except roughly for size and configuration, is not known. A long-dead skull does not reveal much about the brain once housed in it.

● A single solution can now be given intravenously to severly burned patients to replace water, salt and protein as they are lost. It is used during the first 48 hours following burns.

Drs. J. Frederick Eagle, Jr. of St. Luke's Hospital, New York, and Worthington G. Schenck, Jr. and Walton Shim of the Edward J. Meyer Memorial Hospital, Buffalo, reported here that this treatment has been used for all burn patients admitted to their hospitals during the past four to six years.

Replacement of red blood cells is also necessary, but seldom during the first 48 hours.

The solution contains 0.66% sodium chloride, two percent protein and five percent glucose.

Of 28 patients with burns of 15% or more of the body surface treated with the single solution, the physicians reported that only died during the early dangerous period following burn. This was their oldest patient, an 80-year-old woman with a 35% body burn who developed heart failure and pulmonary embolism the second day.

The doctors said the treatment did not reduce the death rate as a number of patients died later, but reduced deaths during the first 48 hours.

The greatest asset of the treatment is that it simplifies care of burned patients. The single solution should be particularly valuable for use in disasters.

Four different solutions are usually given intravenously to severly burned patients. The single solution has the advantage of replacing blood substances at the same rate at which they are being lost.

The report appears in the current issue of the Journal of the American Medical Association (Nov. 19) published in Chicago.

HERE AND THERE IN THE COAL INDUSTRY

● Clarendon N. Crichton, 48 vice president and chairman of the executive committee of Johnstown Coal & Coke Co., died unexpectedly Nov. 11 at his home near Johnstown, Pa. He was also vice president and treasurer of Beaver Coal Co., Beaverdale, Pa.

● C. W. Davis was reelected president of the Southern Coal Producers' Association at the annual membership meeting Nov. 14. Mr. Davis succeeded Joseph E. Moody as SCPA president in March.

Also reelected were Secretary John F. Lane, a partner in the Washington law firm of Gall, Lane and Howe, and Treasurer Laurence E. Tierney, Jr., president of Eastern Coal Corp., Bluefield, W. Va.

The membership returned to office the entire executive committee, of which John J. Foster, vice president of Island Creek Coal Co., is chairman. Other committee members are: David L. Francis, president, Princess Coals, Inc.; W. A. Haslam, president, The New River Co.; W. W. Goldsmith, president, Floyd County Coal Co., Inc.; Patrick C. Graney, vice president, Sterling Smokeless Coal Co.; Roland Luther, vice president, Pocahontas Fuel Co., Inc., Division of Consolidation Coal Co.; L. N. Thomas, president, Carbon Fuel Co.; and Leonard J. Timms, general manager, New River & Pocahontas Consolidated Coal Co.

● Cloyd D. McDowell was reelected president and treasurer of the Harlan Coal Operators Association at the Association's 44th annual meeting. Mrs. Sherman Howard was reelected secretary and Rufus J. Bailey was reappointed safety director.

Charles S. Guthrie, president of the Harlan Fuel Co., Yancey, Ky., and J. B. Gatliff, Jr., president of the High Splint Coal Co., High Splint, Ky., were reelected Harlan directors to the Southern Coal Producers Association.

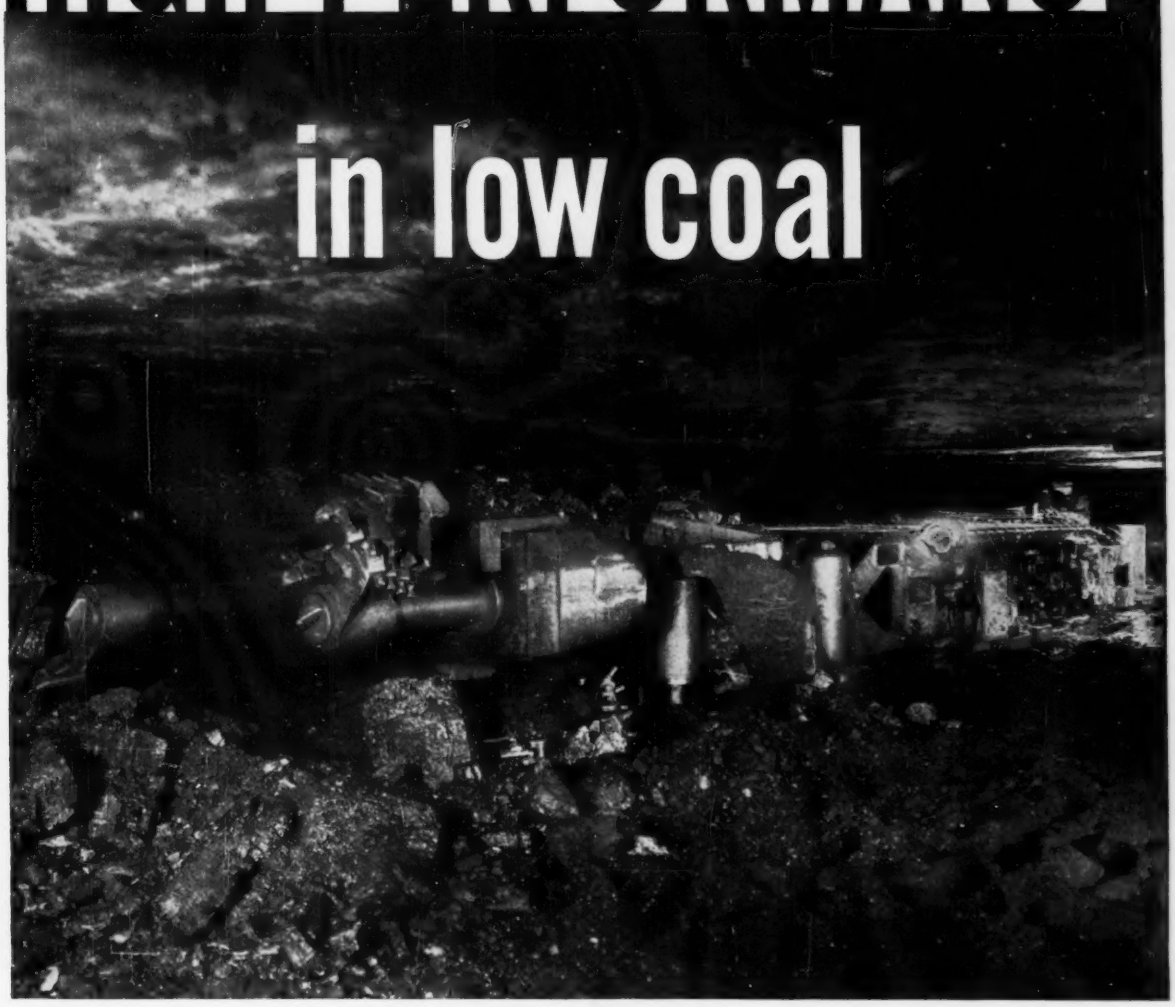
L. P. Johnson, director of Cardinal, Ky., and Joe Straus, partner, Marymac Coal Co., Cardinal, Ky., were reelected to represent Harlan as directors.

● Alan H. McBane was elected vice president of The Valley Camp Coal Co. Mr. McBane, a graduate of Lehigh University and a mining engineer, has been associated with the company since 1934, most recently as general manager of Valley Camp mining operations in Kanawha County, W. Va., with headquarters at Shrewsbury. In his new capacity, he will also assist in planning operations in the company's other mining areas.

● Joseph M. Richards, general manager of Blue Diamond Coal Co., Knoxville, Tenn., was elected president of the Hazard Coal Operators Association at the 45th annual membership meeting. C. E. Fannin, general manager of Carrs Fork Coal Co., Portsmouth, Ohio, was elected vice president, and Fred B. Bullard was reelected executive secretary.

Other directors are: D. S. Blount, president, Cavalier Coal Co., Roanoke, Va.; L. A. Hopper, Greenridge Coals, Inc.; R. H. Kelly and W. B. Sturgill, Kentucky River Coal Sales Corp., Hazard; Harry LaViers, president, South-East Coal Co., Paintsville, Ky.; Bruce L. Davis, Midland Mining Co., Lexington; C. E. Walker, vice president, Jewell Ridge Coal Corp., Tazewell, Va.; R. P. Price, K & F Coal Co., Lexington; and James R. Love, assistant to the president, Blue Diamond Coal Co.

HIGH PERFORMANCE



200% more tonnage per man as JEFFREY 86-A Colmol works in 36″ seam

Production of 860 tons of raw coal per shift has been attained, with consistent performance, giving better than 90 tons per face man over a three-month period.

The 86-A is only 25¼ inches high, makes a cut 14′ 7″ wide, is ideal for low seams 28″ to 44″ in height. All adjustments are hydraulic, and can be made quickly and accurately. Easy maneuvering contributes to the Colmol's high performance.

To move your costs down—productivity up—get Jeffrey's *system engineering* recommendations... covering equipment for mining and hauling or conveying. A system engineered job pays off in predictable results!

The Jeffrey Manufacturing Company, 969 North Fourth Street, Columbus 16, Ohio.

OFFICES: Birmingham, Alabama; Bluefield, West Virginia; Denver, Colorado; Evansville, Indiana; Harlan, Kentucky; Iron Mountain, Michigan; Pittsburgh, Pennsylvania.

CONSISTENT PERFORMANCE WITH COLMOL IN THREE-MONTH PERIOD

No. Shifts	Tonnage	Tons/shift	Tons/man
79	43,450	550	91.3

JEFFREY

MINING • CONVEYING • PROCESSING EQUIPMENT...TRANSMISSION MACHINERY...CONTRACT MANUFACTURING

Left: John Zitko, Ireland Mine, Pittsburgh Consolidation Coal Co., A. E. Molinski, Bethlehem Mines Corp., R. S. Jones, U. S. Bureau Mines, Frank R. Hugus, Joy Mfg. Co., G. E. Hubrig, Kaiser Aluminum Co., Harry Young, Cook Wilson Electric & Supply Co., and chaiman of banquet committee, standing.

Left: Ed Topper, J. & L. Vesta 5 Mine, Howard Fyock, Imperial Coal Co., Walter Tomechek, Buckeye Coal Co., Geo. T. Atkins, Barnes & Tucker Coal Co.

Eighth Annual Meeting Of The Mining Electro-Mechanical Maintenance Association

A. V. Sypneski, presenting annual award kit of tools "left" to A. E. Molinski, Johnstown, Pa., branch for best ideas in maintenance. Johnstown branch, under the direction of Mr. Molinski, was also the best attended branch at meetings.

The Eighth Annual Meeting of the Mining Electro-Mechanical Maintenance Association was held at the Mountain View Hotel near Greensburg, Pennsylvania, Saturday, September 24.

In the October issue of this publication (page 9) it was said that the mechanic, the man who must keep the machines running, will play a big part in industrial man's evolution. This article deals with the man in the front office, the man who can say whether or not any type of machine will be installed.

Considering the most obvious of the evolutionary differences that distinguish man from animal came after the use of tools, it can be seen that man is destined to move forward or perish.

Looking back to the early Ape type man who in a very crude way discovered that the use of tools made his life easier and more pleasant, we find the beginning of the use of tools first for survival, then for betterment of living conditions. Starting with a stone in the paw, pre-human Ape found that he could deliver a blow much more lethan

Myles E. Altimus, Jr., U. S. Steel, Frick District, Uniontown, Pa. presiding over the general session.

Harry Stuhldrayer, Assistant to President, U. S. Steel Corp., was principal speaker at the banquet.

D. C. Jones, organizer of the Assn. addressing the Banquet.

than with the paw alone. Success of the simplest tool started the trend toward a more rapid evolution that led to the civilization we have today.

Early human-like species of man, (Homo sapiens) were striving creatures, full of dominance and a will to live, which evolved an intelligent, exploritory and vigorous primate—a succession of social systems based on emotion and intelligence of its members. The Homo sapiens brought a more rapid tempo of technical-social evolution that resulted in the development of speech, writing, discovery of metals and modern tool-making.

In the middle ages, the civilization that began to spread over Europe brought an impulse for a scientific revolution due to the pressure of higher intellectual needs, but tools developed up to that time helped give the movement direction. Men became more conscious of the existance of machines which have been instrumental in preparing them to change formations of their problems. Men were asking: "How does it work"?

Experimentation became more organized as investigations became more conscious of what man was trying to do. Mathematics was beginning to be used in the attack of problems. Apostles of the new movement claimed there was a scientific method to all realms of inquiry and the foundation of what we call the age of reason was laid. The future appeared to offer ever-broadening vistas and horizons. Man began to feel more capable of control over his destiny. What had become to be known as Western man began to use technology and science in his agriculture and in his industry.

In the closing of the middle centuries, wars and the greater use of artillery produced intensification on the development of newer machinery. In the 17th century scientific methods of development and operation of machines began to take hold. Growth of towns and the coming factory system speeded up the change and unprecedented transformation of life and environment. Further distribution of population and the industrial momentum brought railways, the use of electricity, the internal combustion engine and now electronics.

Assisted by the industrial engineer, science and electronics are bringing automation in industry. This new era of automated industrialization requires special education of the workman which will raise his status and bring a more genuine autonomy. Freedom of man, his rights and his self respect are destined for an all time high. This newest scientific-industrial-automation revolution will not only save many workers lives, and the potential for saving lives is greatest in the deep coal mining industry, it is the only way the industry can be saved from competition. Not enough effort is being made in the front office to utilize automated operations already available in industry, nor to educate manpower to properly operate and to maintain automated machines in our industry. In the face of this utter disregard of urgently pressing circumstances, one can only conclude that the man in the front office of the deep coal mining industry is guilty of unpardonable lethargy.

● The Southern Appalachian Coal Operator's Association elected these officers: President, C. R. Griffith, Southern Coal & Coke Co.; first vice president, Fred Loving, Jr., Kentucky Ridge Coal Co.; second vice president, P.B.C. Smith, Pocahontas Fuel Co.; executive secretary and treasurer, J. O. Archer. The officers, except the executive secretary, also serve as directors.

Other directors elected are: Warren F. Haydon, Wind Rock Coal & Coke Co.; R. H. Hughes and E. F. Wright, Jr., Clinchfield Coal Co.; W. T. Ray, Meadow Creek Coal Co.; Ray S. Walker, Laddie Coal & Mining Co.; and Lindsay Young, Garland Coal Co.

Left: Dr. M. K. McKay, Sanitary Water Board., J. P. MacFarland, Secretary-Treasurer of the Association., H. Rembrant Woolridge, President, Central Pennsylvania Open Pit Mining Association. W. C. Altvater, Pittsburgh and Shawmut Coal Co.

Left: R. R. Bowie, Bowie Coal Co., Edwin C. Ewing, Member of the House of Representatives, Harrisburg, Pa., H. L. Honka, Secretary, Central Pennsylvania Open Pit Mining Association, Harry W. Finley, West Freedom Mining Co.

Annual Meeting Of The Mineral Producers Association

The Annual Meeting of the Mineral Producers Association was held in the Roosevelt Hotel, Pittsburgh, Pennsylvania, Friday October 14.

PROGRAM

12:15 P. M., Marine Room, Membership Luncheon.

Business Meeting and Election of Directors, Members Only, James O. Anderson, Presiding.

2:15 P. M., Ball Room, Afternoon Meeting.

"The Quota", Safety Film, Courtesy Clark Equipment Company and Allied Equipment Corporation.

"Orsanco Water Pollution Control Activities, Film and Address, F. W. Montanori, Sanitary Engineer, Ohio River Valley Water Sanitation Commission.

"Blasting With Ammonium Nitrate", Panel Discussion, Lee Sparks, Atlas Powder Company; Herman Cross, Austin Powder Company; Jerry Spaeth, Monsanto Chemical Company; James P. MacFarlane, Presiding.

6:00 P. M., Blue Room, Reception and Cocktail Party.

Hosts: Allied Equipment Corporation; Anderson Equipment Company; Beckwith Machinery Company; Amos Dolby; Keystone Pipe and Supply Company; Maximon Machine Company; Page Engineering Company; Penn Industrial Supply Company; Frank Swabb Company, Inc.; State Equipment Company; Watson Equipment, Inc.; Whitmyre Equipment Company.

7:00 P. M., Annual Dinner.

Welcome, James O. Anderson.

Toastmaster, F. H. Mohney.

Address by Robert T. Laing, Executive Director, Central Pennsylvania Coal Producers Association.

Mr. Laing's Address

In 1913 when a determined group of "mule skinners" with the assistance of a can of "Black Strap" properly installed me as a trapper and initiated me into manhood, the sidetrack jester facetiously remarked "what I would like is a two-week pay every day and turn the mines inside out so we could all work outside." It took a fertile mind to conceive such a situation, but if that fellow were alive today he would be surprised at how close he was to realizing his wish. In those days we were working in "two foot ten and cap piece" undercutting to coal with a pick or compressed air puncher and taking at least 8 inches of top or bottom rock. The coal was loaded by hand into one-ton cars, pushed to the haulage road, gathered by mules and surfaced by rope haulage. Electric energy was just in its infancy. Light was furnished by an open flame lamp nourished by sunshine and oil. Safety lamps were used in gaseous mines, but often an explosion determined whether a mine was gaseous. The miner was of medium age, very often an immigrant captured by a labor agent at port of embarkation. He had very

little education, no experience and very often could not speak English. His tools consisted of a shovel, pick, auger, tamping bar, needle, axe, powder jar, squibbs and dry copies of the Chicago Blade and Ledger or the Pennsylvania Grit. The miner worked 8 hours per day, mostly on his knees, no portal-to-portal. The day wage was $3.6579 and tonnage or incentive rates varied according to conditions. He carried his lunch consisting of two hardboiled eggs, a chunk of salami, pumpernickel and cold tea or coffee in a double-decker tin pail kept glittering bright with mother coal. His most prized possessions were a lamp picker and a check number. His immediate desires were simple. He wanted steady work in a dry place, a company house to live in, unlimited credit at the grab and a blue boy on Saturday night. His physical welfare was protected by a company doctor, for which he paid $1.00 per month. The doctor dispensed gobs of many colored aspirins. The company looked after its employees with a determined spirit of paternalism.

In 1913 there were 189,924 miners employed in the bituminous mines of Pennsylvania. These men worked 251 days a year, produced 173,000,000 tons of coal—an average of 3.62 tons per man per day. During that year there were 611 fatal accidents or 1 per 283,000 tons. The tonnage was disposed of as follows:

Tons sold to local trade and used by employees: 1,349,098 — 0.8% of total.

Tons used at mines for steam and heat: 4,188,999 - 2.4% of total.

Tons used for railroad fuel: 37,374,494 - 21.6% of total.

Tons of coal used in manufacturing of coke: 37,381,029 - 21.6% of total.

Tons shipped to Great Lakes: 10,554,834 - 6.1% of total.

Tons shipped to Tidewater: 15,226,646 - 8.8% of total.

Tons shipped to market by rail: 66,954,964 - 38.7% of total.

The only competition we had was kerosene used to feed the lights in our homes. Residual oil, natural gas, hydro-electric did not bother us. There was no competition in transportation—the railroads were fighting among themselves, not with us.

Forty-six years later—1959, the miner is 45.7 years of age. He is a citizen and resident of his community, received his job on the basis of ability, and is protected by seniority rights. He is generally a trained mechanic. The company furnishes what tools he needs and also provides various protective devices. He drives to work in an automobile, carries a warm lunch in thermos equipment, bathes in a clean bath house, and works in comparatively safe surroundings. His daily activity and well-being are supervised by a host of company foreman and many government inspectors who operate under a strict code of laws. If he becomes unemployed or injured, he receives compensation. Through welfare funds, hospitalization, etc., he and his family receive the best medical attention possible. He owns his own home, lives and shops where he pleases, educates his children in modern schools to which transportation is provided. Through public parks, clean streams and community buildings he has ample avenues for the employment of his leisure time. He is a respected member of the community, takes active part in civic and political activities, and when he reaches the age of 65 he will receive an income for life.

In 1959 there were 36,323 miners employed in the bituminous industry of Pennsylvania, a decline of 81% since 1913. These men produced 65,347,088 tons of coal (a decline of 62.2% from 1913), with a potential of 106,700,000 tons. The men worked an average of 180 days per year, and produced 9.97 tons per man day. There were 35 fatal accidents—1 per 1,875,074 tons of production. The coal was mined by continuous miners costing in excess of $100,000, power shovels costing as much as $2,000,000, and other mechanical means. The coal is transported to the surface in large cars moved by huge electrical locomotives or by a continuous belt. At the surface the coal is prepared for for market in modern preparation plants and sent to the consumer by rail, truck, water, or pipe line, according to his exact specifications. 31.7% of the coal mined in Pennsylvania is by the strip method. In our district it is 47.3%.

James O. Anderson, reelected president of the Association, welcoming the group at the banquet.

Robert T. Laing, Director Central Pennsylvania Coal Producers Association, was principal speaker.

Left, back row: Carl Moody, Craig Brothers Coal Co., Chuck Cooper, Beckwith Machinery Co., Harry L. Craig, and Wm. Heck, Craig Brothers Coal Co., Jim Boyle, Beckwith Machinery Co., standing next to the lady is F. W. Craig, Craig Coal Co.

(Work outside)

The basic wage of the miner is $24.25 for 8 hours work portal-to-portal. Besides this, inumerable fringe benefits are provide.

Our coal at the present time is distributed as follows:—

(Year 1959)

Tons used at mines and sales to employees: 980,000 — 1.5% of total

Tons shipped to retail dealers: 1,960,500 — 3.0% of total

Tons shipped for coke and gas plants: 23,590,200 — 36.1% of total

Tons shipped for railroad fuel: 457,500 — 0.7% of total

Tons shipped to Great Lakes: 4,966,400 — 7.6% of total

Tons shipped to Tidewater: 9,671,400 — 14.8% of total

Tons shipped to market by rail: 14,964,500 — 22.9% of total

Tons shipped to market by truck: 8,756,500 — 13.4% of total

We have covered the past and present pretty thoroughly. Let's give a little look into the future. Pennsylvania is blessed with tremendous bituminous reserves. Reliable surveys show that we had original deposits of 75,093,000,000 tons of mineable coal. To date 26,642,000,000 tons have been recovered, leaving 48,451,000,000 tons available, of which 50% or 24,225,000,000 tons is recoverable. Our coal is very versatile in character and can be prepared to meet the specifications of the most discriminate consumer. We have an abundance of labor and trained personnel. We are located in a geographical and population area that will require a tremendous amount of fuel and energy. We have lost the railroad fuel business (37,000,000 tons per year) but through research that is presently being conducted with coal-burning locomotives we have an even chance of recapturing a large percentage of this market. There is also the great probability of a vast program of electrification in the railroad industry which indirectly would be a boom to our industry. Our domestic market would greatly increase if it were not for the home heating with oil and gas. However, judging by the present prominence of home heating by electricity we will capture a major portion of this domestic market. Expansion of in-

Left: E. R. Stamp, Salem Tool Co., H. Elmer Whitemyer, Whitemyer Equipment Co., E. R. Peterson, C. I. T. Corp., L. G. Boyer, Whitemyer Equipment Co., Paul Smith, Anderson Equipment Co., J. E. Ehlert, Euclid Div., General Motors Corp.

Left: Ron Smith, Austin Powder Co., Ray Turner, Turner Bros., Paul Boyles, Boyles Coal & Supply Co., Alex Watson, Watson Equipment Co., M. Urey, Turner Bros., Earl Glass, Western Penna., Coal Operators Assn.

dustry and trade abroad will furnish a market for our metallurgical coal in greater quantities. The steel industry, one of our best customers, will need greater quantities of coal to meet the needs of our inevitable growth in population and industry.

What about our competitors — residual oil, natural gas and hydroelectric?

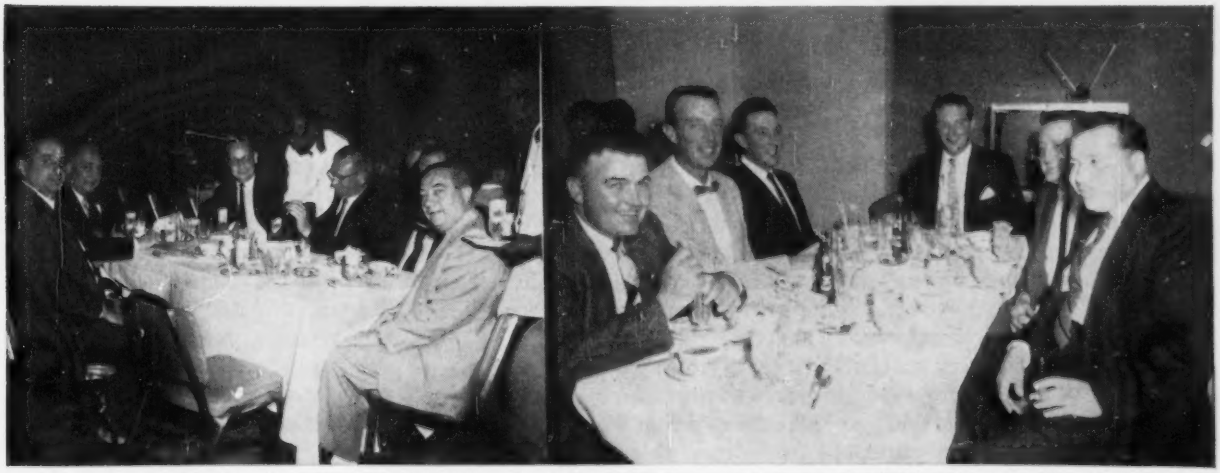
RESIDUAL OIL: We have made some progress recently in curbing the growth of this nasty competition. As you know, the government presently limits the imported quantity. Also, our industry through efficient mining and marketing is gradually reducing the spread in price. As of today the published price of residual oil is equivalent to coal delivered to the Eastern Seaboard at $10.50 per ton. As of today oil is running out of everybody's ear. We can measure accurately the reserves of oil, but as the standard of living is raised in undeveloped nations undoubtedly some of this huge supply of oil will find markets other than the United States. In 1959 oil supplied only 8% of utility fuel while coal supplied 66%.

Natural gas has, because of its nature, been classified as a critical fuel of undetermined supply. It hurts us principally in areas where "dumping" is practiced. Under this practice gas is delivered to industrial and utility consumers during off-peak periods at a ridiculously low price. During these periods coal is practically eliminated as a competitor. Unlike residual oil, gas is constantly rising in price and production costs are on the increase. In 1959 natural gas supplied 26% of the fuel used by utilities.

According to reliable reports, further development in the hydroelectric field will be slow and of minor consequence.

Now, let's see what is being done and what can be done to make and keep our industry in a healthy productive and profitable condition.

I believe the coal industry is united today as never before in its efforts to serve itself and our country. Besides its own unity, it has the cooperation of allied industries. The combined forces of the National Coal Association, American Mining Congress, National Coal Policy Conference, Inc., Fuels Research, Bituminous Coal Operators' Association, United Mine Workers of America, the United States Bureau of Mines, the Pennsylvania Department of Mines and Minerals Industries, the manufacturers of mining equipment, colleges and other agencies of research, railroads, consumers and 75 local coal associations—have one broad aim—the protection and advancement of our industry. Collectively this group of organizations is currently exercising its combined strength to bring about, through government and courts, a fair and honest competitive pattern between hydro power, oil, gas and coal. The group has joined personnel and resources in the large and intricate field of research. Just recently the Federal Government appropriated $1,000,000 in this important field, and our own State is providing in excess of $400,000 per biennium in this field, These funds, together with private funds and a consolidation of efforts, personnel and other resources, will surely be fruitful. There is a concerted drive by all of these agencies to hold our present customers and attract new ones. Capable engineers are available, on call, to serve you on any problem of coal-burning installations, large or small. Great and constant effort is being exercised in the fields of education, public and government relations. In such fields as home heating by electricity, electrification of railroads and "coal by wire", there is unity of purpose. Stepped up activity is in progress in the technological field, especially in the development of more efficient mining machinery and preparation facilities. More economical transportation is engaging the attention of the group. The railroads, in some instances, have volunteered reductions in order to hold business for the industry, and transportation of coal via pipeline has been a reality. There has been considerable consolidation of properties within our industry and



Left: A. E. Bosetti, Keystone Deisel Engine Co., Elmer Snyder, Allegheny Minerals Corp., W. E. Stammates, Keystone Deisel Engine Co., Whitey Morrison, Allegheny Minerals Corp., P. A. Lantzy, C. H. Snyder Co.

Left: G. R. Wright, Lloyd Stefler, G. C. Stefler, and Warren Wright, all of the Wright Coal Co., Frank Mead and Bob Giles of the Parkway Equipment Co.

Left: Bob Granville, State Equipment Co., W. T. Phillips, United Eastern Coal Sales Co., Robert Bailey, Bailey Coal Co., Charles Freeman.

Left: Calvin McKnight, Miller McKnight Coal Coal Co., Mac Chutz, Chutz Brothers Coal Co., Max Snyder, Beckwith Machinery Co., Charles Smith, Chutz Brothers Coal Co.

more to come. The entire group of organizations is constantly on the alert to prevent adverse or punitive legislation or regulations. In the fields of water pollution and air pollution there is a determined effort of cooperation with governmental agencies to find equitable means of protecting the health and property of our country and our industry. These are just a few of the areas that are receiving the united attention of the above organizations. It is the determined purpose of all these proups to exert their activity and influence in every field of our industry in order that we can compete on a fair basis with other fuels and contribute a valuable service to the security and general welfare of our nation.

How can you, as individuals or companies, assist in this effort? By giving your personal time, effort and funds to the support of your local organizations, the National organizations, and the political platforms that are in agreement with our aims.

I do not intend to compete as a prophet with the sidetrack prophet. However, I would like to read a statement from my report to our Directors on the occasion of our Annual Meetings:—

"On April 24, 1918 The Central Pennsylvania Coal Producers' Association was formed. A lot of coal has gone over the grates since that time. As near as we can figure, 1,871,447,000 tons were mined in the area covered by your Association. In 1918 we operated 1,052 mines with 78,308 men, and produced 70,478,000 tons of coal. During 1959 we operated 935 mines with 17,004 men and produced 29,663,672 tons. In 1918 we had no strip tonnage. During 1959 there were 431 strip pits and 22 auger mines in the area and they produced 47.4 per cent of the tonnage. In 1918 our district produced 3.33 tons per man day. Today the average is 9.88. In 1918 the average value of coal was $2.60 per ton. Today it is $4.62. In 1918 the miners worked 8 hours per day and received an average wage of $5.00 per day. Today our miners work 8 hours portal-to-portal and receive an average of $24.25 per day. If this trend continues our miners in 1975 will produce 16 tons per man per day. They will receive pay at the rate of $5.00 per hour and coal will be worth $6.00 per ton."

I hope you notice that I have made no reference to atomic energy. We are told that we have nothing to fear from this potential energy source for at least 20 years. However, we can not measure the ingenuity of the American engineer. Maybe some day one of these brilliant fellows will come up with a formula that will bring chaos to the fuel industry. If this happens we will be in the same position as the colored fellow sometimes called "Jig" at Cape Canaveral who told his eager audience: "Boy, the colored people are going to take over this place. On the first of June we are going to put a coon on the moon. Then, boy, you can say the Jig is up." When we get cheap atomic power, the jig is up.

● A new bulletin, descriptive of its complete line of 125 c.f.m. rotary compressors, has just been issued by Davey Compressor Co., Kent, Ohio.

Contents include 18 illustration of important compressor design features and an explanation of operating principles. Said to have 50% fewer working parts than other units of similar capacity, the Davey machines are claimed to be extremely economical and readily accessible for service. Compressors are available in skid-mounted utility models and as 2-wheel trailers. Users have their choice of gasoline or diesel engines.

For bulletin copies, write Davey Compressor Co., Kent, Ohio. Ask for Form E-268.

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You can depend on Cat parts for latest design —for long life. This assures you of trouble-free operation and lowest final costs. Due to technological development, Cat replacement parts are often *better* than the originals they replace. (Check Item 2, next page, for more information.)

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Our shops are laid out to handle and expedite the repair of Cat-built products. This, plus many special tools and fixtures, enables us to do first class repairs at low cost. Most important, our men have thorough Caterpillar equipment know-how, gained from years of experience.

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Various credit arrangements and financial plans are available whether your need concerns new or used equipment or parts. Let us work with you to develop a plan that best fits your requirements.

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Our parts representatives have a thorough knowledge of application to help solve your particular problem. They will also expedite your orders, keeping repair time to a minimum.

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Our service policy is to keep your equipment working! That's why expert field service is available 24 hours a day—as close as your nearest telephone. Our servicemen will come with special equipment, genuine parts and a thorough knowledge of Caterpillar machines.

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Service begins as soon as the machine is delivered. We'll be glad to help instruct your men on proper operating, maintenance and application techniques to get the greatest return on your investment.

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Changing Personnel Practices In Alabama Coal Mines

By H. Ellsworth Steele

Personnel practices in Alabama coal mines reflect clearly three major forces which impinge upon the industry. In the labor market the mining companies must deal with the powerful and aggressive United Mine Workers; in the product market, their coal competes vigorously with hydro-electric power, natural gas and petroleum products. Furthermore, the mining process itself is an inherently dangerous one.

These underlying economic and technical factors have led the industry to stress mechanization, increased worker productivity, and improved safety practices. These changes, necessary because of increasing product competition, have enabled the industry to greatly increase wages and fringe benefits for the workers yet hold prices fairly stable. Total employment, however, has steadily declined. The efforts of the coal mining companies to operate profitably despite the obstacles confronting them shape the personnel practices followed by the Alabama section of the industry.

Alabama is an important coal mining state, but not one the first rank. The state produced 2.7 percent of the nation's bituminous coal in 1958, which placed it eighth among the 50 states. From the earliest days of recorded production through 1958 Alabama mines yeilded almost one billion tons of coal, a total exceeded by only six other states. Active mines in Alabama in 1958 numbered 209, of which 34 were rail-connected and 175, truck mines. Of the total, 24 were strip mines and two auger mines. Alabama's mines are located in eleven counties stretching northeastward from the middle of the state to the Tennessee line. Of the 8,068 men employed in and about the mines in 1957-58, 6,041 were working underground and 2,027 on the surface. They produced 11,287,465 tons of bituminous coal which added approximately $70 million to the state's income. Of the total tonnage, 76 percent came from underground mines and 24 percent from strip mining and auger mining operations. Captive coal mines, owned primarily by iron and steel and electric power companies, produced 74 of the total, whereas commercial mines produced only 26 percent. Of the entire eleven million tons mined 55 percent was converted into coke, most of it to be consumed by the state's thriving iron and steel industry.

Coverage of this report

This study reports the changing personnel practices in Alabama coal mines as revealed in two surveys of the industry. The first, made in 1952, covered 11 mines employing 2,671 workers. The second, made in 1958, included 17 mines employing 3,820 men and producing more than 53 percent of the coal mined in the state that year. Fifteen of the mines surveyed are rail-connected, whereas the other two are truck mines. The 15 rail-connected mines produced approximately 60 percent of the coal mined by the entire group of 34 such mines. Their responses are thus probably representative of practices in the rail-connected mines, especially of the larger ones. To supplement this information gathered by questionnaire and correspondence, interviews were held with representative company officials.

Objectives

What personnel practices are followed in Alabama mines? What are the major changes which have been made in these practices since 1952? What influence do differences in number of workers, use of specialists in handling personnel relations and in company structure have upon the specific practices followed by the mines? These are the questions which this study seeks to answer.

Changing employment practices

Mine superintendents are exercising greater care in employing new men now than they did in 1952. Their current labor force needs are less; consequently, they can afford to be more selective. Total employment in Alabama coal mines dropped steadily from 11,800 in 1951-52 to 8,068 in 1957-1958, a decline of 32 percent, which threw many miners on the labor market. Despite this reduction in manpower, production in 1958 was only 2 percent less than in 1952, an achievement made possible by the introduction of improved and more complex machinery. Meanwhile, average hourly rates moved from $2.04 in 1952 to $2.79 in December, 1958. Skilled men capable of operating the new equipment effectively so as to earn these higher rates can be secured without an expensive training program only by close study of job applicants. Finally, the filing of more than a thousand silicosis claims against the companies since that disease was brought within the state's workmen's compensation law in 1951 has caused mine superintendents to be wary of "hiring other companies liabilities."

Mine official themselves consider the inauguration of "more strict physical examinations," "closer screening of employees," and "complete investigation of references on new employees," to be major changes in personnel practices made since 1952. Data given in Table 1 lend support to

these views. The great majority of mines are now using application blanks and are requesting references of applicants. A few are even using tests and some more are considering their use. The increased use of application blanks is especially significant. Indeed, the difference between 1952 and 1958 is so great that it could be due to chance in selection of the two groups of mines compared only one time in twenty.

Personnel Practices	Percentage of Mines Using Practice	
	1952	1958
Employment practices	–	
Use application blanks	36	82*
Request references	73	82
Use tests in hiring	9	18
Safety practices		
Carry on a safety program	100	94
Furnish some first aid treatment	91	100
Provide a nurse and/or a doctor in the plant on a part-time or full-time basis#		50
Productivity practices		
Have full-time personnel workers	27	53
Have an organized personnel department	27	53
Carry on personnel research	45	53
Sponsor a suggestion plan	9	18
Usually have exit interviews	73	71
Keep records of exit interviews[1]	25	67**
Pay by piece rate or incentive system	38*	6
Have a profit sharing program[2]	0	20
Use job evaluation[3]	18	7
Use employee rating system	10	18
Employ outside consultants	0	0
Have a training program	80**	47
Usually work more than one shift	100	76
Unionization		
Unionized in part or in whole	100	94
Have a formalized grievance procedure	100	88
Post job vacancies for bidding	0	12
Use seniority in promotion, layoff or rehire	64	94*
Fringe benefits		
Have a pension plan (other than OASI)	27	94*
Rent company houses to employees	82	53
Prepared meals available to employees	0	0
Have a credit union	0	13
Have a group insurance or disability plan##	100	100
Life		56
Accidental death or dismemberment		44
Disability income		60
Hospital expense		100
Mines providing hospital expense insurance which have Blue Cross insurance		47
Surgical expense		100
Mines providing surgical expense insurance which have Blue Shield insurance		50
Medical expense		100
Mines providing medical expense insurance which have Blue Shield insurance		44

[1] Percentages are of mines which usually have exit interviews.

[2] These cover supervisors and executives only.

[3] The 1958 survey form included a definition of job evaluation which probably eliminated some "yes" answers that were received in 1952.

* Difference significant at the 5 percent (or higher) level of confidence.

** Difference significant at the 10 percent (or higher) level of confidence.

This question was not included in the 1952 survey.

The questions concerning types of group insurance were not included in the 1952 survey.

Table 1. Personnel Practices in Representative Alabama Coal Mines, 1952 and 1958.

Improved Safety Practices

Mining has always been dangerous, but Alabama mining companies have made substantial progress in providing safe conditions for their workers. From 1911 through 1950-51, 2,971 men were killed in Alabama mines, an average of 72.5 per year. From 1951-52 through 1957-58, 75 died, an average of 10.7. The number of employees per fatality rose from 895 in 1951-52 to 1,613 in 1957-58 and the number of tons of coal mined per fatality jumped from 837,000 to 2,257,000 in the same period. Despite these improvements, Alabama consistently lags behind the national average in tons mined per fatality.

To improve their safety practices Alabama coal companies cooperate with both state and federal agencies. In 1957-58, for instance, state mine inspectors made 1,161 complete inspections of Alabama mines to enforce coal mine safety code provisions covering the volume and flow of air, dust control, dangerous gas, blasting practices and power circuits. It must be noted, however, that even though they are concerned over silicosis claims, Alabama mines in 1958 treated less than one percent of the coal produced to allay dust, whereas throughout the nation the average was 13 percent. On the other hand, Alabama leads the nation in use of rock dust to prevent explosions. Training in accident prevention, first aid and mine rescue was given to 1,033 miners in 1958, primarily by representatives of the United States Bureau of Mines. In addition, in 1958, the State Division of Safety and Inspection certified 60 new mine foreman and fire bosses for passing written and oral safety examinations given by the Division. Hard hats and safety shoes are standard equipment for all underground workers in 21 Alabama mines which produce 79 per-

cent of the underground coal.

The figures on mine safety practices presented in Table 1 require explanation. Safety programs are not being abandoned. The one mine reporting no program in 1958 is a truck mine not included in the 1952 sample. Interviews make it clear that the mines have been placing increased emphasis upon safety, particulary upon improved ventilation and greater use of water to allay dust and reduce the silicosis hazard. All mines surveyed now provide first aid treatment. Half of them have a doctor or nurse at the mine at least on a part-time basis. Most of these latter mines have a doctor present, but half of them have both a doctor and a nurse.

Techniques for greater productivity

Productivity, or output per man-day, nearly doubled in Alabama coal mines from 1950 to 1958. Behind this remarkable accomplishment lies a vigorous program of mechanization. In underground production, the tonnage cut by machines rose from 84 to 96 per cent. By the end of the period power drills were being used in mining 84 percent of the coal. The proportion mechanically loaded jumped from 76 to 96 percent in these years. Of the total 1958 production, 55 percent was being mechanically crushed and the percentage mechanically cleaned rose from 80 to 90 in the eight years under study. Furthermore, high productivity strip mining, which accounted for only 14 percent of total output in 1951-52, was turning out 24 percent of the total in 1958.

Even though a higher percentage of Alabama production than of national production is mechanically handled, Alabama output per man-day in 1958 was only 79 percent of the national average. Alabama is gaining, however, for in 1950 the state's output per man-day was only 64 percent of that for the nation. The lower productivity of Alabama mines is explained primarily by less favorable geological conditions and by a somewhat lower percentage of production by high productivity productivity strip and auger mines (24 percent vs. 27 percent). Throughout the United States in 1958 strip mines turned out 21.5 tons per man-day compared with 9.4 tons by underground mines. Thus, the proportion of strip and underground mines in an area can notably affect its average output per man-day.

To help achieve greater productivity, the larger Alabama mines, at least, have turned to full-time personnel workers and organized personnel department for assistance, as can be seen in Table 1. The closing of smaller mines which lose out in the competitive struggle has tended to concentrate production in the larger mines which find it feasible to employ personnel specialist. These specialists in turn have encouraged more research concerning turnover, accidents and other personnel problems. There has even been an increase in the use of suggestion plans, although one personnel director interviewed argued vigorously against their use, calling them a "crutch" to get around poor foremen. In his view, a good foreman is continually receiving ideas from his men and does not need a suggestion program, which frequently causes ill will, to stimulate communication. The few programs reported in the survey are probably quite informal.

Management personnel in a continuing majority of the mines usually interview departing workers and in a greatly increased proportion of these mines records are now being kept, possibly due to the likelihood of later silicosis claims. Miners formerly were paid entirely by the tonnage they produced, but such piece work payment is rapidly disappearing from Alabama mines. Some managers complain that older workers were content to draw the guaranteed minimum for which they had to load only a few tons. More important, mechanization makes it impossible to measure individual output. The emergence of profit sharing programs—for supervisors and executive only—however, is viewed by some mine officials as part of the "trend of the times" needed to hold trained and key personnel at a minimum cost to the company. They stress the income tax advantages to the recipients under such programs.

Only a few mines used job evaluation and merit rating in either year and none of them felt it necessary to call in outside consultants to advise on personnel problems. Even though one personnel director declared that he could not see how any company could get by without a training program, especially for foremen, many responding mines have halted their programs. The answer probably lies in the ready availability of trained men due to declining employment throughout the industry.

Unionization

The United Mine Workers' Union continued its dominance throughout the period under study. The one non-union mine reporting in 1958 was not covered in the earlier study (see Table 1). The two mines without grievance procedures in 1958 include the non-union mine and one union mine, neither of which was surveyed before. Only two mines, part of a national firm, post job vacancies and allow their workers to bid for them. The UMW apparently has little interest in this procedure, relying on seniority to take men from the helper's position to that of operator in due course. The increased use of seniority, on the other hand, is significant. The years studied have brought many work force reductions leading the union to increase its pressure for use of seniority in such cases. Some managers find it helpful in avoiding the charge of discrimination in making these reductions. Other officials report that they are continually hammering away to get skill and qualifications considered.

Fringe Benefits

Mining companies, like other firms, are granting their workers continually improved fringe benefits. Indeed, the United Mine Work-

ers and the coal companies have pioneered in several fields. The data in Table 1 show a remarkable increase in pension programs, a prime UMW objective. As one manager stated, a mine must have such a program also to attract good section foremen. The decline in the use of housing is great. Automobiles and improved roads explain the change. "The people don't have to live in the in the mining camps now, and they don't," as one personnel manager sees it. Company housing was necessary when the mines were isolated communities, but they always involved many headaches for management and were never profitable. The problem now is not to build houses, but parking lots.

Quite understandably, none of the mines surveyed have offered prepared meals to their employees. Few, even now, have credit unions. On the other hand, all have some type of group insurance, notably insurance covering hospitable, surgical and medical expenses. All organized companies contribute to the UMW Welfare Fund, and many have additional programs covering supervisory and office personnel. These last employees especially are likely to be covered by the life insurance and Blue Cross-Blue Shield programs reported in Table 1.

The influence of Mine Size

Greater size apparently has an impact upon the personnel practices followed in a mine, but also does unionization, use of personnel specialists, company structure (single-unit compared with multiple-unit firms) and location of company headquarters in the South or outside the South. Thus in comparing the practices of "small" and "large" mines in Table 3 it is important to note from Table 2 that the large mines differ in an important degree from the small mines on each of these scores.

A greater percentage of the large than of the small mines use three-fifths of the practices presented in Table 3. In only seven instances do the small mines report wider usage. In providing a nurse and/or a doctor, working more than one shift, posting job vacanies for bidding and in having a credit union, the differences are statistically significent, at least at the 10 percent level. That is, broadly, the differences found are so great that they would occur less than one time in ten by chance in the selecting of the sample.

On the basis of differences of 20 percent or more, the large mines are also more likely than small ones to use application blanks, have organized personnel departments, carry on personnel research, keep records of exit interviews, and have a formal grievance procedure. Only in the use of suggestion plans and merit rating of employees do the small mines report plus differences of such magnitude.

The Impact of Personnel Specialization

Mines with full-time personnel workers and/or an organized department are ordinarily larger than mines without them. They are also more likely than their counterparts to be unionized, to be part of a multiple-unit firm and to have their company headquarters outside the South, as can be seen in Table 2. Thus, only part of the differences in the practices of these two groups of mines as reported in Table 3 are due to differences in personnel specialization.

The mines with specialists report wider usage of the great majority of practices investigated than do the mines without specialists. In the use of references, records of exit interviews, multiple shifts, and formal grievance procedures the differences are statistically significant. Only in the provision of group life insurance does a significent contrary tendency emerge. At least 20 percent more mines with specialists than without report the use of application blanks, nurses and doctors, profit sharing, training programs, company housing and credit unions. Mines without specialists report similar differences in the provision of accidental death and disability insurance and disability income insurance.

The Influence of Company Structure

Mines which are part of multiple-unit firms report wider usage than do mines without such connections of 20 of the 35 practices covered in Table 3. From Table 2 it can be seen that these multiple-unit mines are larger, more widely unionized, more specialized in personnel matters and more apt to have company headquarters outside the South than the single-unit mines. Generally, all of

Classification	Number of Mines	Median Number of Employees	Are Unionized	Have Personnel Specialization	Are Part of a Multiple-unit Firm	Have Company Headquarters in the North
Size						
Large (250 and more employees)	7	415	100%	71%	100%	29%
Small (1-249 employees)	10	78	90	60	40	0
Unionization						
Union	16	208		69	69	13
Non-union	1	20		0	0	0
Personnel Specialization						
Present	11	215	100		70	18
Absent	6	58	83		50	0
Company structure						
Multiple-unit	11	325	100	73		18
Single-unit	6	70	83	50		0
Location of Company Headquarters						
In the North	2	325	100	100	100	
In the South	15	140	93	60	60	

Table 2. Characteristics of 17 Alabama Coal Mines, 1958.

Personnel Practices	Number of Employees		Personnel Specialization		Company Structure	
	Under 250	250 and More	Absent	Present	Single-unit	Multiple-unit
Employment practices						
Use application blanks	70%	100%	67%	91%	83%	82%
Request references	80	86	50	100*	83	82
Use tests in hiring	10	29	17	18	17	18
Safety practices						
Carry on a safety program	90	100	83	100	83	100
Furnish some first aid treatment	100	100	100	100	100	100
Provide a nurse and/or a doctor in the plant on a part-time or full-time basis	11	100*	33	60	0	73*
Productivity practices						
Have full-time personnel workers	50	57			33	64
Have an organized personnel department	40	71			17	73*
Carry on personnel research	40	71	50	55	33	64
Sponsor a suggestion plan	30	0	17	18	33	9
Usually have exit interviews	70	71	67	73	83	64
Keep records of exit interviews[1]	57	80	25	88*	60	71
Pay by piece rate or incentive system	10	0	0	9	17	0
Have a profit sharing program[2]	20	20	0	33	33	11
Use job evaluation	13	0	0	10	20	0
Use employee rating system	30	0	17	18	0	27
Have a training program	40	57	33	55	50	45
Usually work more than one shift	60	100**	50	91**	50	91
Unionization						
Unionized in part or in whole	90%	100%	83%	100%	83%	100%
Have a formalized grievance procedure	80	100	67	100*	83	91
Post job vacancies for bidding	0	29**	0	18	0	18
Use seniority in promotion, layoff or rehire	90	100	83	100	83	100
Fringe benefits						
Have a pension plan (other than OASI)	90	100	83	100	83	100
Rent company houses to employees	60	43	33	64	33	64
Have a credit union	0	29**	0	22	0	20
Have a group insurance or disability plan	100	100	100	100	100	100
Life	56	57	83**	40	50	60
Accidental death or dismemberment	44	43	67	30	50	40
Disability income	63	57	80	50	60	60
Hospital expense	100	100	100	100	100	100
Mines providing hospital expense insurance which have Blue Cross insurance	40	57	50	45	0	73*
Surgical expense	100	100	100	100	100	100
Mines providing surgical expense insurance which have Blue Shield insurance	50	50	60	45	17	70*
Medical expense	100	100	100	100	100	100
Mines providing medical expense insurance which have Blue Shield insurance	40	50	40	45	17	60**

1. Percentages are of mines which usually have exit interviews.
2. These programs cover supervisors and executives only.
* Difference significant at the 5 percent (or higher) level of confidence.
** Difference significant at the 10 percent (or higher) level of confidence.

Table 3. Personnel Practices in Alabama Coal Mines, Classified by Size, Use of Personnel Specialization, and Company Structure, 1958.

these factors influence personnel practices in the same direction; therefore, only part of the observed differences can be attributed to differences in company structure.

Nevertheless, it is noteworthy that a significantly larger percentage of the multiple-unit mines report that they provide nurses and/or doctors, have an organized personnel department, and provide hospital, surgical and medical expense insurance, for some employees at least, through Blue Cross-Blue Shield.

Differences of at least 20 percent can also be seen in the greater usage by multiple-unit mines of full-time

personnel workers, personnel research, employee rating, company housing, and credit unions. Equally important differences are found in the wider usage by single-unit mines of suggestion plans, profit sharing and job evaluation.

Conclusions

In recent years Alabama mine officials have made several important changes in their personnel practices to meet the problems posed by a militant union, severe product competition and a continuingly dangerous production process.

Managers have placed greatly increased stress on the selection of new employees and on keeping records on those who leave . . . in order to secure men capable of working efficiently in an industry making rapid technological progress and, apparently, in order to keep silicosis claims to a miminum. Increased mechanization has led the industry to almost complete abandonment of piece rates as no longer feasible. The ready availability of experienced men, due in large part to the introduction of improved and highly productive machinery, has enabled the mines to reduce their training efforts. To handle the problems associated with the great work force reduction which the industry has undergone, the mines have yeilded to the UMW's demand for wider use of seniority. The pressure of the union, and of competition for able supervisors can be seen in the spread of pension programs. Greater use of specialists to assist in the personnel field and the continued flight from company housing are also noteworthy changes.

Greater size, personnel specialization and membership in a firm with several units all are apparently associated with greater usage of most of the personnel practices investigated. In thirteen instances these differences are statistically significant. Only in the provision of group life insurance by mines without personnel specialization does a significant contrary tendency appear.

● Loren W. (Buzz) Samsel, Jr. has joined State Equipment Company in Pittsburgh as a salesman. His territory includes Bedford, Cambria, Indiana, and Somerset Counties.

Loren W. (Buzz) Samsel, Jr.

Buzz resides at 278 Euclid Avenue, Brookville, Pennsylvania. He is 26 years of age, married with two children, is a graduate of Brown University, Providence, Rhode Island, where he majored in Economics.

He still carries a pilot's license because of his service with the U. S. Air Force with the rank of First Lieutenant. His hobbies are all sports, and he is a member of the National Rifle Association and has been close to the leaders in many of their contests in Pennsylvania.

● The Glen Alden Corporation has contracted to purchase the operating assets of the Hudson Coal Company of Scranton, Pa.

Hudson Coal, the nation's third largest marketer of anthracite, will become a new wholly owned subsidiary of Glen Alden Corporation. Mr. Harry W. Bradbury, President of Glen Alden Coal Co., Wilkes-Barre, Pa., a division of the Glen Alden Corporation, will be President of Hudson Coal.

The purchase price was not revealed.

Glen Alden Coal, the nation's largest anthracite producer, recorded sales of approximately $30,000,000 in 1959. Hudson had sales of approximately $17,000,000 during the comparable period. Hudson will continue to market anthracite under its brand name "Sterling Coal." Glen Alden sells anthracite under the "Blue Coal" label.

Lima 1250 with Allis-Chalmers 21000 engine . . . P & N Coal Co. at Benezett Pit.

Announcing

the appointment of your
Lister Diesel Engine Distributor
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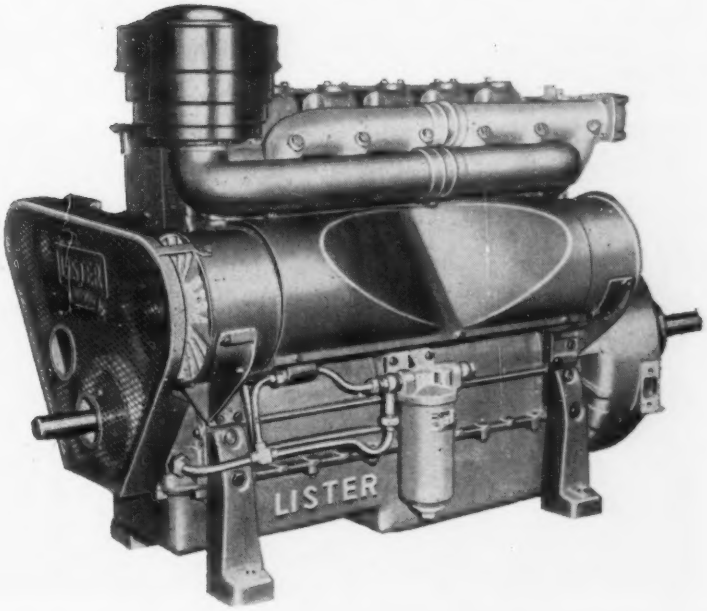

WORLD FAMOUS **Air Cooled Diesel** ENGINES
FROM **3½ HP** TO **72 HP**

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Cable Address "LISTARD"

Bill Pry

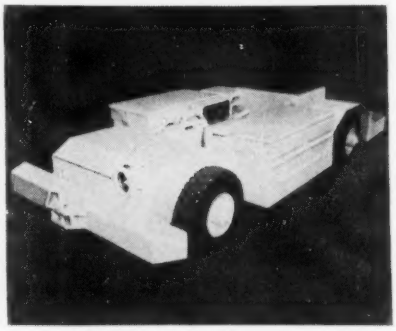
● Bill Pry recently has joined State Equipment Company in Pittsburgh as Office Manager and specialist in used equipment. Prior to joining State, Bill was with Atlas Equipment Company for eleven years working in both the parts and service departments. He has had a total of thirteen years in the construction equipment business and four years in the steel industry.

He is 35, married, and the proud father of three children. He lives in Dravosburg. State customers are urged to contact Bill whenever they have an interest in a used machine.

● Introduction of a new heavy duty, battery-powered tractor to meet the rigorous requirements for mantrip and supply haulage in high capacity trackless coal mines has been announced here by Long-Airdox Co.

Extensive field testing in Kentucky, Virginia, Ohio, and Pennsylvania coal mines preceded the introduction of the Long Model 3510-A Battery Tractor.

Equipped with four-wheel drive and four-wheel steer, this tractor under normal conditions can haul heavy loads at speeds of 3 to 6 mph. It is particularly adaptable to pulling trains of 5 to 10 trailers loaded with men or supplies.



Model 3510-A Battery Tractor
Long-Airdox Co., Oak Hill, W. Va.

Smooth acceleration is provided from rest to low speed and from low to high speed. Motion is controlled through a two speed, full magnetic contactor control starter.

A comfortable ride for the operator is provided through mounting of front and rear axle assemblies on heavy duty coil springs, two for each set of wheels, to eliminate shock transmitted to the chassis.

The tractor features USBM permissible type electrical enclosures, and employes 48 cell, 96 volt, 240 ampere hour capacity batteries, mounted in two separate steel trays, as standard equipment. Battery trays, mounted for easy accessibility, provide ample power for a complete work shift.

Long-Airdox offers a selenium rectifier type battery charge for AC operation, this unit having a 96 volt output at an adjustable 45 ampere rate. For DC operation, Long-Airdox has a resistance type charger with 96 volt output for 250 volt, DC input.

The tractor, which weighs 8300 lbs. with batteries, employs standard 650 x 10, 10 ply, lug tread tires. It is also equipped with a six-inch diameter trip gong to serve as a warning device.

Long-Airdox Type 1051 Trailers with capacity to 2,000 lbs. are available for use with the tractors. Each trailer has pin-type couplings, fixed rigid axles, a solid steel bed, and 550-8, 10 ply tires, on the four wheels.

Additional details are available by writing Long-Airdox Co., Box 331, Oak Hill, W. Va.

FOR **HIGH PRODUCTION** AND **LOWEST OPERATING** COSTS—

NOTHING equals the PAGE 700 SERIES SINGLE DECK WALKING DRAGLINE

5 to 25 cubic yard capacities

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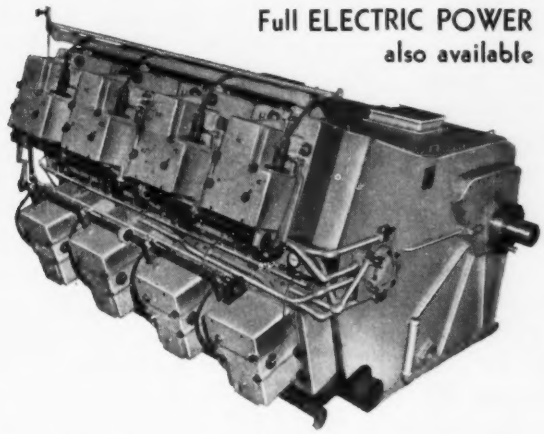
DRAGLINE-PROVED PAGE
HORIZONTAL V-TYPE DIESEL

Full ELECTRIC POWER also available



The Page Engines powering 700 Series Draglines are designed specifically for dragline work . . . to work longer, at lower cost, with less downtime and maintenance than any other engine. Big bearings, big pistons, a short, stiff crankshaft and slow (450 RPM) speed are only part of the story of why many Page Diesels are still producing maximum horsepower after 20 years of operation. Bulletin WDSD-155 has full details.

Page 700 Series Draglines are rugged, compact, work-horse machines. They are designed and built with the fastest practical hoist and swing speed to reduce cycle time and increase yardage. Page Diesel or full Electric power.

The Page 700 Series Dragline is proof that a fast, efficient, medium-sized machine will *consistently* out-perform larger, but slower machines in virtually every kind of digging.

In addition, initial investment for a Page 700 Series Walking Dragline is considerably smaller, and operating and maintenance costs are lower. *Want more details? Write for Bulletin WDSD-155 today. There's no obligation.*

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Hazleton National Bank Bldg.
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Page

Automatic Dragline Buckets
Walking Draglines

ADVERTISER'S INDEX

DECEMBER, 1960

J. T. FISH SEZ:

We give away nothing but Good, Honest Deals. The Savings goes to You!

JOY EQUIPMENT—REBUILT

6—Joy 14BU 9AE—26"Hi—New 1958.
3—Joy 14BU Loaders, low pedestal, 7AE, 1956 & 57.
6—Joy 14BU Loaders, medium pedestal, 7RBE.
1—Joy 14BU 7CE High pedestal loader.
4—Joy 14BU 3PE Loaders.
2—Joy 12BU Joy Loaders complete with Piggybacks.
2—Joy 12BU Loaders, 9E latest type 250 V. DC.
3—Joy 12BU Loaders, 220/440 Volt AC.
1—Joy 20BU Loader, latest type.
4—Joy 11BU Loaders, latest type.
1—Joy 8BU Loader, 34" overall height.
2—Joy 8BU Loaders, 220 V. AC.
1—Joy curved Bar Head for 14BU, complete.
6—Reliance 24-J Motors, 7½ H.P.
4—Reliance 38-J Motors, 10 H.P.
20—9-J Motors, 4 H.P.
2—Goodman 660 Loaders on Crawlers, 440 V. AC. like new.
1—Goodman 665 Loader on Crawlers, latest type 250 V. DC.
1—Goodman 865 Loader, 26" hi. Rebuilt. 250 V. DC.
1—Goodman 660 Loader on Crawlers, excellent 250 V. DC.
4—Joy 8SC Shuttle Cars, rebuilt.
4—Joy 6SC Shuttle Cars, rebuilt, latest type
1—Joy 5SC Shuttle Car, Excellent.
2—Joy 32E9 Shuttle Cars.
2—Joy 32E10 Shuttle Cars, rebuilt.
6—Joy 32E15 Shuttle Cars, rebuilt.
4—Joy 32E16 Shuttle Cars, rebuilt.
10—Joy 42E16 Shuttle Cars, rebuilt.
1—Joy CD-22 Drills, on rubber, like new.
6—Joy T-2-5 low pan Crawler Trucks, rebuilt.
1—Joy T-2-6 low pan Crawler Truck with reel.
2—Joy T-1, Standard Crawler Trucks, 220 AC.
1—Joy T-1 Standard Crawler Truck, 250 DC.
4—Joy 11-B Cutting Mach., like new, 35 & 50 HP.
1—Joy 7-B Cutting Mach., like new, 250 V. DC.
2—Goodman 212 Cutting Machines, 19" high.
1—Goodman 312 Cutting Machine, 17" high.
3—Goodman 412 Cutting Machines, 19" high.
1—Goodman Machine on Crawler, 31" high. All hydraulic.
6—Goodman 512 Machines with Bugdusters.
6—Goodman 612 Cutting Machines, 250 & 500 volt.
1—Jeffrey 70 URB rubber tired Cutter. Universal head, perfect condition.
1—Goodman 2410 Rubber Tired Cutter, Universal head, like new.
3—Joy 11RU Rubber Tired Cutters, with bugdusters. Universal heads, dual tires, like new. 250 V. DC.
1—Joy 10RU Rubber Tired Cutter, Universal head, 220/440 V. AC. Perfect
4—Joy 10RU Rubber Tired Cutters, Universal head, 250 V. D.C.
6—7AU's on track, Universal head.
2—Jeffrey 29UC Cutting Machines, Universal head, cuts anywhere in seam, 38" high, on Crawlers, 250 volt D.C.
1—Jeffrey 29LC on Crawlers, rebuilt.

LOCOMOTIVES

1—Goodman 6 ton, 93-A, 27" high, armor plate frame.
1—Jeffrey 15 ton MH-77 locomotive, armor plate frame.
3—Jeffrey, 13 ton, type MH-110, 36",42",44" ga.
2—Jeffrey 10 ton, type MH-110, 42" and 44" ga.
2—Jeffrey, 10 ton, type MH-78, 42" and 44" ga.
2—Goodman 8-30 and 10-30 Locos., 26" above rail.
1—Jeffrey MH-121, 4 ton, like new, with reel, 24" overall height.
2—Jeffrey MH-150, 6 ton, 26" overall height, rebuilt, with reel.
12—Jeffrey, 6 ton, type MH-88, 42", 44" and 48" ga.
4—Jeffrey, 8 ton, type MH-100 2½" armor plate frames.
3—Jeffrey, 4 ton, type MH-96, 42", 44", 48" ga.
1—G.E., 4 ton, type 825 Locomotive, 22" high.
10—G.E., 6 ton, types 801, 803, 821 Locomotives. 42", 44" and 48" ga
1—G.E., 8 ton, type 822 Locomotive, 44" ga.
3—G.E., 10 ton, type 809 Locomotives, 42", 44" and 48" ga.
2—G. E. 13 ton, type 829 Locomotives, armor plate frames.
1—Goodman 91A Locomotive, 8 ton, 26" overall height.
2—Goodman, type 33, 6 ton, 44" and 48" ga.
3—Westinghouse type 902, 4 ton, 42" and 48" ga.
2—Atlas Battery Locomotives, 36" ga.
1—Atlas Trolley Locomotive, 4 ton, 24" high.
2—Westinghouse, type 904, 6 ton, 44" and 48" ga.
2—Westinghouse, type 906, 44" and 48" ga.
2—Westinghouse, type 907, 10 ton, 44" and 48" ga.
8—Jeffrey MH-78 Locomotive Units, cheap.
4—Jeffrey MH-88 Locomotive Units, real bargains.
6—Jeffrey MH-100 Locomotive Units, resonable.
3—Plymouth Diesel Locomotives, 8 and 10 tons, 42" and 44" ga.
Locomotive Trucks & Spare Armatures for the above.

TIPPLE EQUIPMENT

1—All Steel 5 Track Tipple, new 1957, complete with washer, silo, oil treating system, all bolted construction.
1—Complete Five Track Tipple with Washers and Air Tables.
1—Complete stoker plant, all steel.
2—Complete Tipples, 3 & 5 track, steel and wood.
3—Cleaning Plants, 1 ea. McNally, Roberts and Schaefer, Jeffrey Washers and Air-Flo Tables.
4—Complete Aerial Trams for coal or refuse.
3—Complete Rope and Button Lines.
2—Monitor Lines complete with Drums, excel.
1—Allis-Chalmers 5 x 12 Rippflo Vibrator.
1—Allis-Chalmers 4 x 12 Low-Head Vibrator.
1—Robins Gyrex Vibrator, 4 x 10.
10—Belt and Apron type Loading Booms.
6—Shaker Screens.
1—Robins Car Shakeout.
20—Crushers, various sizes—Jeffrey, McLanahan & McNally.
4—Mine Scales, 10 & 20 ton.
3—Truck Scales, 25 to 40 ton, late type.
Feeders, Belt and Drag Conveyors, Car Retarders.

CUTTING MACHINES

1—Joy 10RU Rubber Tired Cutters, Universal head 220/440 volt AC, perfect
3—Joy 10RU Rubber Tired Cutters, Universal head, 250 V. DC.
2—Joy 11RU Rubber Tired Cutters 250 V. DC.
1—Goodman 2410 Rubber Tired Cutter. Universal head, new 1956. Excellent.
2—Jeffrey 29UC Universal Machines on Crawlers
1—Goodman on Crawlers, 31" overall height.
3—Baby Goodman 212's, rebuilt. 250 V. D. C.
7—Goodman 212 Cutting Machines, 19" high.
4—Goodman 312 Cutting Machines, 17" high.
3—Goodman 412 Cutting Machines, 19" high.
6—Goodman 512's with Bugdusters, like new.
4—Goodman 512's, rebuilt, or as removed from service.
6—Goodman 612,s—250 & 500 Volt A. C.
3—Goodman 112's, 220/440 Volt A. C.
1—Joy 7-B Cutting Machine, 250 Volt D. C.
4—Joy 11B Cutting Machines, rebuilt, 35 & 50 H. P.
6—7AU's, on track, Universal head.
10—Goodman 12AA's and 112AA's, 220 V. D. C.
2—Goodman 324 Slabbers.
2—Goodman 724 Slabbers.
2—Goodman 824 Slabbers.
6—Jeffrey 35L's, like new, 250 V. D. C. 17" high.
2—Jeffrey 35L's, on low vein trucks.
2—Jeffrey 35L's, 220/440 A. C.
3—Jeffrey 35BB's 220/440 A. C.
15—Jeffrey 35B's and 35BB's 250 V. D. C.
2—Jeffrey 29B's on track.
10—Jeffrey 29C's track mounted.
2—Jeffrey 29L's, on Crawlers. Excellent.
1—Sullivan CE7, 220/440 V. A. C.

CONVEYORS

2—Goodmon 97HC 30" & 36" Rope Belts, 1600' perfect with or without rubber.
2—Jeffrey 52-B tandem drive 30" Belt Conveyors 1,500'.
1—Jeffrey 52-B tandem drive 36" Belt Conveyor.
1—Joy 30" Underground Belt Conveyor. Excell.
1—Goodman 97-C, 30" tandem drive.
1—Goodman 97-C, 26" Conveyor. 1,000 long.
1—Robins 36" tandem drive, with or without structure.
1,200' Robins 36" Underground Structure, like new.
1,000' Conveyor Belt, 42".
4,000' Conveyor Belt, 36".
3,000' Conveyor Belt, 30".
4,000' Conveyor Belt, 26".
8—Jeffrey 61AM 12" Chain Conveyors, 300'.
2—61EW Elevating Conveyors.
2—61WH 15" Room Conveyors, 300'.
2—Joy 15" Room Conveyors, 300'.
2—Joy 20" Conveyors, 300'.
4—Joy Ladel UN-17 Shakers.
10—Goodman G-12½ and G-15 Shakers.
1,000' Goodman 18" Flat Belt Conveyors, tandem drive any length, Perfect.

CONVERTORS AND DIESEL PLANTS

2—500KW G. E. Stationary Rectifiers.
4—1,000KW Stationary Rectifiers.
2—100KW. G. E. TCC-6's, 275 V., Rotary Converter.
1—150KW. G. E. HCC-6 275 V., Rotary Converters.
1—150KW. 6 phase. Allis-Chalmers Rotary Converters, 275 V. D. C.
2—200KW G. E. HCC-6's, Rotary Convertors, 275 V. D. C. Steel frames, Newly rewound.
3—300KW G. E. HCC-6's Rotary Converters, 275 V. D. C. Like New.
2—300KW Westinghouse, 6 phase, Rotary Converters, 275 V. D. C.
2—500KW. West. Rotary Converters, 275 V. D.C. Perfect.
2—200KW Westinghouse Rotary Converters, 275 V. D.C. Newly Rewound.
(All the above with 6900/13000 and/or 2300/4000 primary transformers).
2—100KW MG Sets, 275 V. D.C.
2—150KW MG Sets, G.E. and West., 275 V. D.C.
1—200KW MG Set, rebuilt, 275 V. D. C.
1—200KW MG Sets, G. E. perfect, 275 V. D. C.
2—300KW G.E. MG Sets, like new.
1—300KW West. 600 volt MG Set, rebuilt.
2—300KW Westinghouse, 600 volt, 6 phase. Rotary Converters.
2—500KW Westinghouse, 600 volt, D.C., 6 phase, Rotary Converters.
2—500KW HCC-6's, Rotary Converters, 6 phase, 600 V. D.C.
1—GMC-471 Diesel with 60KW, 250 V. D.C. Gen.
3—GMC-671 Diesels with 75KW and 110KW, 250 V. DC. Gen.

LOADING MACHINES

16—Joy Loaders, 14BU, 12BU, 8BU, 11BU, 20BU.
5—Joy 12BU9E Loaders, 220/440 V. A.C. Excellent.
3—Joy 12BU9E Loaders, latest type.
2—Joy 12BU with Piggyback Conveyors.
2—Goodman 865 Loaders, 26", on crawlers.
1—Goodman 665 Loader, on Crawlers, rebuilt.
2—Goodman 660 Loaders, 440 V. A. C. perfect.
1—Goodman 660 Loader, on Crawlers, 250 V. DC.
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2—Jeffrey 61 CLR's on rubber, 26".
3—Jeffrey L-500 Loaders.
2—Myers Whaley, No. 3 Automatic Loaders.
2—Clarkson Loaders, 26" above rail.

MISCELLANEOUS

150 Tons Copper—4/0 and 9 Section Trolley 1/0, 2/0, 40 Stranded, 750 MCM, 1,000,000 MCM Insulated
1—Each 4', 5', 6' & 8' Hi Pressure Joy & Jeffrey latest type Fans.
1—Complete Five Track Tipple with Washers and Air Tables
5—Complete Tipples, 3 to 5 Track. Wood and Steel.
Steel trestles for drop bottom cars.
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Battery Supply Tractors, Rubber Tired.
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10—Air Compressors, 1 H.P. to 40 H.P.
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300—Mine Cars, drop bottom, 42" ga.
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50—Mine Cars, drop bottom 48" ga.
100—Mine Cars, 18" high, end dump, 44" ga.
300—Mine Cars, end dump and drop bottom, 20" high, 48" ga.
1—10 ton Mine Car Scale with Recorder.
4—Brown Fayro 15 HP latst type Hoists.
15—Brown Fayro HKL and HG Car Spotters.
1—Brown Fayro Hydraulic Car Spotter.
1—12 ton Differential Slate Larry.
Incline Hoists, 25 to 50 H. P.
1—Jeffrey 5', 6' and 8', Like New, Aerodyne Fan
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2—Storage Tanks, 10,000 Gallons.
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10,000 Five Gallon G. I. Cans, screw lids.
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Thousands of feet of rubber covered three conductor cable. All sizes.
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Huge Stock of Mine Supplies.
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There's no wasted horsepower with a Manitowoc Model 4500. Intelligent design forethought has reduced power-robbing extra parts throughout this big capacity mining machine. In fact, there are only 15 gears and 8 sprockets! And *only working gears turn* . . . Manitowoc's exclusive slide pinion arrangement disconnects all others until their function is needed. Even many *small* excavators don't have simplicity of design like this!

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GREATER SPEED AND POWER—LESS DEAD WEIGHT

TRUE MOBILITY TO MAKE MINING PROFITABLE ANYWHERE

GREATER STABILITY PRODUCES FULL BUCKETS, LOWER GROUND PRESSURE

DRAG TRAVELS ANYPLACE WITH A LOW, LOW TRAVEL CLEARANCE OF ONLY 17′ 2″

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✱ WE STAND BEHIND OUR SALES

For the past 53 years Beckwith has earned the confidence of customers by honestly describing the condition of each used machine.

✱ GUARANTEE IS BACKED BY A BOND

For the information of the purchaser who has not dealt with Beckwith before, we offer the additional security of a written guarantee covering the condition and performance of the unit. This guarantee is backed by a $10,000 bond.

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Aware that equipment purchase sometimes pinches the budget, Beckwith is prepared to work out the best possible terms for your particular situation.

✱ WIDE SELECTION IS AVAILABLE

Not only do you have a wide range of makes and models to choose from, but there is a good selection of machine condition. If you need a completely rebuilt unit, we have it; if you want a machine that you can repair yourself, we've got it, too.

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No matter where you work in Western Pennsylvania, northern Maryland or northern West Virginia, you are never far from one of Beckwith's six conveniently located shops. Caterpillar servicemen are readily available to assist you in keeping your machines in top producing condition.

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BUCKHANNON PIKE, CLARKSBURG, WEST VIRGINIA

Walter W. Coldren
Used Equipment Manager

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Caterpillar D8, 14A Series, with 8S Blade and rear cable control, lights, electric starter and canopy top. Engine, transmission and cable control overhauled. Good undercarriage. Excellent condition.
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Bonded Buy $23,800

ITEM P-989:
Caterpillar D8, 2-U 12000 Series, with hydraulic straight blade. Good operating condition.
Location: Pittsburgh, Pennsylvania
Certified Buy $10,000

ITEM P-202:
Caterpillar 933 Traxcavator. Very good condition.
Location: Pittsburgh, Pennsylvania
Bonded Buy $8,800

ITEM P-153:
Model 800 Case Highlift. Low hours, good condition.
Location: Pittsburgh, Pennsylvania
Certified Buy $5,200

ITEM C-578:
Caterpillar D4-HT 4 Traxcavator, 1-1/4 cubic yard bucket. Good condition.
Location: Clearfield, Pennsylvania
Certified Buy $5,500

ITEM P-66:
AG 6H Cletrac with hydraulic angling blade. Good condition.
Location: Pittsburgh, Pennsylvania
Certified Buy $1,800

Visit any of our six Service Centers for more information or call our sales department for the machine you need. Our stock of used machines changes daily so if we don't have the exact item you want, at the price you want to pay, we can probably find it for you.

At Thompson & Phillips, HD-21 cuts down overburden before shooting, levels bench and clears for dragline, backfills . . .

"It works faster...
"It costs less to operate..."

... says "Peck" Phillips, Thompson & Phillips Clay & Coal Co., Inc.,

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